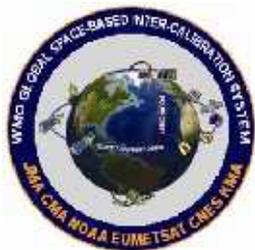


# Discussion – Operation

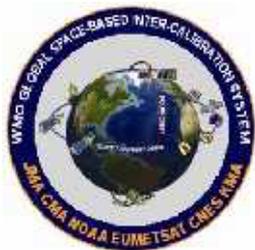
All members are invited to provide comments or suggestions regarding GSICS implementation and operation



# Issues – IASI Data at JMA

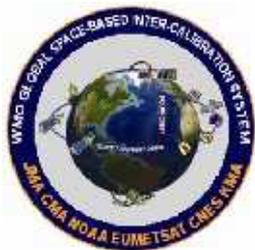


- ❖ JMA (Y. Tahara) reports difficulty in obtaining IASI data from NOAA CLASS
- ❖ EUMETSAT (P. Miu) offers to help
- ❖ This will be resolved between the two members



# Issues – Design Principles

- ❖ GSICS goals require that **single pixel** collocations **anywhere** within the GEO field of regard be collected **continuously** over **long term** for **all bands**.
- ❖ GSICS should **collect all it can** to allow future selection and manipulation by users.
- ❖ **No comments**



# Issues – Algorithm Compatibility



## ❖ Goal/Balance

- Encourage innovation
- Ensure compatibility

## ❖ Level of compatibility

- Common output (definition/format)
- Common principle
- Common logic
- Common threshold
- Common code



Less compatible

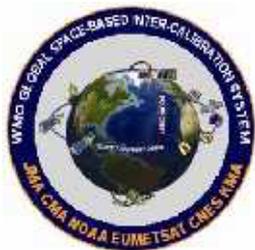
Completely compatible

## ❖ Questions

- Where we are and where we want to be?
- Shall we all implement a baseline algorithm?

## ❖ Conclusion

- Not all members are ready to use a common algorithm
- Not all members are ready to share collocation data



# Issues – Archiving Strategy

## ❖ Name of **SSS##.AIRS.yyyy.mm.dd.grn.lat.long.bbb**

sss Satellite ID (e.g., GOS, MET, FY\_, MTS)

## Satellite series number (e.g., 07)

yyyy Year (2007, 2008, ...)

mm Month (01, 02, ..., 11, 12)

dd Day (01, 02, ..., 30, 31)

grn AIRS granule number (001, 002, ..., 239, 240)

lat Latitude (e.g., N04)

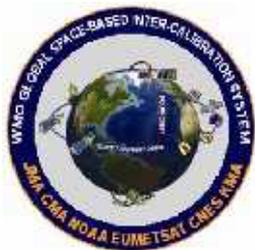
long Longitude (e.g., W120)

bbb Band wavelength ( $\mu\text{m} \times 10$ , e.g., 039)

## ❖ Collocations (next page, ~30MB/day/GEO)

## ❖ Irrelevant without common algorithm and data

- However, need to add AIRS version code
- Reasonable to save metadata only. Content, format, and nomenclature TBD.

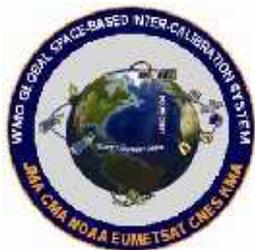


# Issues – Output Parameters



Real * 4	yyddd	year and day of year	<b>ccyyddd</b>
Real * 4	hhmmss	hour/minute/sec of GEO observation	
Real * 4	time_diff	LEO_time – GEO_time (sec)	
Real * 4	zeni_diff	$\cos(\theta_{\text{GEO}})/\cos(\theta_{\text{LEO}}) - 1$	<b>delete</b>
Real * 8	time	LEO time of observation (TAI second)	
Real * 4	pix_lat	collocation latitude (degree east positive)	
Real * 4	pix_lon	collocation longitude (degree north positive)	
Real * 4	geo_zen	GEO zenith angle (degree)	
Real * 4	leo_zen	LEO zenith angle (degree)	
Real * 4	sol_zen	SUN zenith angle (degree)	
Real * 4	geo_azi	GEO azimuth angle (degree)	
Real * 4	leo_azi	LEO azimuth angle (degree)	
Real * 4	sol_azi	SUN azimuth angle (degree)	
Real * 4	airs_cnv_shift	Ch6 shift SRF (irrelevant in general – to be deleted)	
Real * 4	airs_mmg_shift	Ch6 shift SRF (irrelevant in general – to be deleted)	
Real * 4	stat(6,4)	mean & stdv of collocation environment, mean & stdv of collocation target, convoluted AIRS radiance using modified Kato and Gunshor methods, for four channels	
Real * 4	leo_rad(2378)	AIRS spectral radiances at 2378 channels	
Real * 4	geo_rad(17,9,4)	GEO rad at 17 elements, 9 lines, and 4 channels	
Real * 4	leo_lat, leo_lon, geo_lat, geo_lon, sun_lat, sun_lon		

**Irrelevant without common data**



# Issues – Reporting

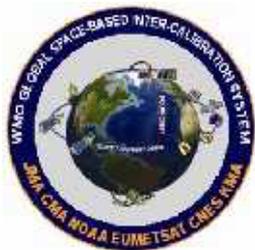
## ❖ Suggestion 1

- Output results
- Slope and intercept
- Start with something simple, e.g., daily mean bias
- Improve as we go

## ❖ Suggestion 2

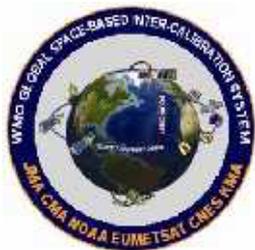
- ?

❖ Not all members are ready for routine reporting



# Issues – Version Control

- ❖ Version 2 to incorporate JMA modular design
- ❖ Convention for versions
  - How big a change qualifies for Version 2.x instead of Version 1.x or Version 1.2.x?
  - How little a change qualifies for a new version at all?
  - What if ATBD didn't change, only the implementation?
  - Document what have been changed?
  - Procedure for community feedback and version release
- ❖ Irrelevant without common algorithm



## Issues – Input Data

- ❖ A complete set of GEO and LEO data within a common period of time (one day)
  - AIRS granules from NASA DAAC
    - Channel validity as of May 2007
    - Leap second as of May 2007
    - Update strategy TBD
    - Short-cut (e.g., from member of AIRS Science Team)
- ❖ Irrelevant without common algorithm